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ABSTRACT

Vermont's Equal Educational Opportunity Act of 1997, "Act 60," was designed to rectify inequities in the state's funding of public education, as determined by the Vermont Supreme Court. This report examines the degree to which Act 60 has improved conditions over the last 5 years, focusing on the 3 main equity goals of Act 60 and the court's decision: student resource equity, tax burden equity, and academic achievement equity. Analysis of data for 2001-02 found that Act 60 has made significant progress in reducing inequities in student resources. The gap in per-pupil spending between wealthier and poorer towns dropped to $900 from $2100 in FY98. Act 60 significantly improved past inequities of tax burden for funding local schools. The percentage of income needed to support education dropped in all income categories but the decrease was most dramatic for those earning the least. Academic achievement inequities still exist. However, academic achievement has improved in all categories of wealth, and the gap between wealthier and poorer communities in the percentage of students meeting or exceeding state standards has decreased. Notable and continuous progress is being made toward providing equal educational opportunities and reducing past educational inequities. The equity gains noted in a previous study have continued and, in most cases, strengthened. Appendices present the previous study's results, operational definitions of variables, and caveats about analyzing academic achievement. (Author/SV)

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STILL "A REASONABLY EQUAL SHARE"

Update on Educational Equity in Vermont: Year 2001–2002

A Report by the Rural School and Community Trust
February 2002

by Lorna Jimerson

RC 023355

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The Rural School and Community Trust

The Rural School and Community Trust (Rural Trust) is a nonprofit educational organization dedicated to enlarging student learning and improving community life by strengthening relationships between rural schools and communities and engaging students in community-based public work.

Through advocacy, research and outreach, the Rural Trust strives to create a more favorable environment for rural schooling, for student work with a public audience and use and for more active community participation in schooling.

Founded as the Annenberg Rural Challenge in 1995, the Rural Trust today works with more than 700 rural elementary and secondary schools in 35 states.

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STILL "A REASONABLY EQUAL SHARE"

Update on Educational Equity in Vermont: Year 2001–2002

A Report by the Rural School and Community Trust

Summary

Vermont's Equal Educational Opportunity Act of 1997, Act 60, was designed to rectify educational inequities that were the basis of the Supreme Court ruling that declared the state's foundation formula unconstitutional. This study examines the degree to which Act 60 has improved conditions over the last five years. The analysis focuses on the three main equity goals of Act 60 and the *Brigham* decision: *Student Resource Equity, Tax Burden Equity* and *Academic Achievement Equity.*

The results of the analysis, using the latest available data for 2001–2002, reveal that:

- **Act 60 is making significant and steady progress in reducing inequities of Student Resources.** Before Act 60 (FY 98), property-rich towns spent an average of 37% more, or $2,100, per pupil, compared to the poorest towns. In FY 2002, this spending gap was less than 13%, with the per-pupil disparity diminished to $900. Thus wealthy communities continue to spend more on their schools, but the gap has been significantly reduced. (See graphs on page 5.)
- **Act 60 has significantly improved past inequities of Tax Burden for funding local schools.** In FY 98, the poorest families paid the highest percentage of their income for school taxes (3.3%) and the wealthiest families paid the least (2.5%). Last year, the poorest households paid less than two percent for school taxes (1.8%), while the wealthiest households paid 2.3%. The percentage of income needed to support education dropped in all income categories, though the decrease is most dramatic for those earning the least. (See graphs on page 7.)
- **Academic Achievement inequities still exist.** Children living in property-rich communities do better on state assessments. Also, children living in towns that spend more on education do better. However, on both of these indicators, our analysis indicates a **continued trend toward shrinking the achievement gap.** For example, in FY 98, the percentage of students meeting or exceeding the standards was 19% higher for the wealthiest communities as compared to the poorest communities. In FY 01 this gap was reduced to 12%. (See graphs on page 9 and page 10.)
- **Academic achievement continues to improve in all categories of property wealth *and* in all categories.** Student academic improvement, since the passage of Act 60, has not been limited to the poorest communities. More Vermont students are meeting or exceeding standards across all levels of spending and all levels of property wealth.
- **Notable and continuous progress is being made toward providing equal educational opportunities and reducing past educational inequities.** The equity gains noted in last year's study have continued and, in most cases, are strengthened.

We conclude that Act 60 is fulfilling the mandates of the Supreme Court decision and the goals of the legislation. Spending inequities are decreasing. Tax burdens are more appropriately aligned with income. More children are performing better on statewide assessments. Local control has not been diminished. These results reinforce our conclusions from last year and indicate that Vermont is continuing along an effective path towards alleviating inequity and providing equal educational opportunity for all Vermont students.

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"To keep a democracy competitive and thriving, students must be afforded equal access to all that our educational system has to offer. In the funding of what our Constitution places at the core of a successful democracy, the children of Vermont are entitled to a reasonably equal share."[1]

I. Introduction

In February 1997, the Vermont Supreme Court declared that the foundation system for funding schools "with its substantial dependence on local property taxes and resultant wide disparities in revenues available to local school districts, deprives children of an equal educational opportunity in violation of the Vermont Constitution."[2] This ruling, known as the *Brigham* decision, served as the impetus to break a decades-long impasse and compelled the Legislature to pass a law designed to meet the court's requirements for providing equal educational opportunity. Thus, the Equal Educational Opportunity Act of 1997, commonly referred to as Act 60, was passed in May 1997 and is now in its second year of full implementation.[3]

From the start, Act 60 was a lightning rod for intense state and national debate. This friction has not diminished over the past five years. Resistance to Act 60 primarily centers on the legislation's sharing (or "recapture") components. These provisions require property-rich towns to share financial resources with poorer communities. Political opposition and community protests have prompted repeated legislative attempts to change or repeal Act 60. This ongoing controversy is accompanied by a swirl of reports from diverse sources, with critics claiming Act 60's failure, and advocates declaring success.

The Rural School and Community Trust (the Rural Trust) investigated the impact of Act 60 on equity a year ago and published the results in February 2001.[4] This report updates that initial study using the latest available data to help sort out competing claims and enable a more informed dialogue about the merits and/or weaknesses of Act 60.

The Rural Trust is a national nonprofit, nonpartisan organization with an interest in a broad range of educational policy issues. We do not promote specific legislation, in Vermont or elsewhere. We do support equal educational opportunity and believe that educational equity is one of the fundamental pillars of a democratic society.

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[1] P. 22, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

[2] P.1, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

[3] The first three years of Act 60 implementation were "transition" years, as tax formulas were phased in.

[4] *A Reasonably Equal Share: Educational Equity in Vermont. A Status Report—Year 2000–2001.* Published by the Rural School and Community Trust, Washington, DC, February 2001.

II. Equity Goals of the *Brigham* Decision and Act 60

Act 60 was explicitly written to address the three main equity goals identified in the *Brigham* decision. In this report, we call these equity goals: *Student Resource Equity*; *Tax Burden Equity*; and *Academic Achievement Equity*.

Goal 1. Improve *Student Resource Equity*

Prior to Act 60, there was significant disparity in per pupil spending associated with town property wealth. Property-rich districts invested far more in their local schools than did poor districts. For example, in 1995, one town spent $2,979 per pupil, while another invested over two-and-one-half times that amount—$7,726. A report released in 1996 by the Vermont Department of Education noted that these spending differences were closely related to town property wealth.[5]

This inequity became the prime focus of the *Brigham* decision. The justices declared that *"the distribution of a resource as precious as educational opportunity may not have as its determining force the mere fortuity of a child's residence"*[6] and *"that equal educational opportunity cannot be achieved when property-rich districts may tax low and property-poor districts must tax high to achieve even minimum standards...."*[7]

Act 60's equalized yield formulas were constructed to address this inequity. The equalized, or guaranteed, yield provisions, for both the block grant and above-block spending, are designed so that one cent of tax levy raises the same amount per pupil in every community. A town's property wealth—or lack of it—no longer determines the tax rate. Under Act 60, equal spending results in equal tax rates.

Goal 2. Improve *Tax Burden Equity* for Individuals

Prior to Act 60, the tax burden on individuals varied enormously. Low-income Vermonters paid proportionally more than high-income households to support local schools. In 1994, school taxes ranged from 8.4% of after-tax income to less than 1%, with a federal range ratio of 248%.[8] This inequity was highlighted by the plaintiffs in the *Brigham* decision who noted that *"taxpayers from property-poor districts are compelled to pay higher tax rates and therefore contribute disproportionate sums to fund education."*[9]

Though the Supreme Court did not rule on this claim, Act 60 did incorporate the income sensitivity (or property tax reduction) component to alleviate this inequity. This provision adjusts the amount of school property taxes for households based on income level. Clearly the Vermont legislators also believed that individual's tax burden should be commensurate with their ability to pay relative to their income level.

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[5] *A Scorecard for School Finance, FY 95.* Published by the Vermont Department of Education, March 1996.

[6] P. 20, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

[7] P. 23, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

[8] *A Scorecard for School Finance, FY 95.* Published by the Vermont Department of Education, March 1996. This report noted that a federal range ratio of 0% "would indicate perfect equity to the taxpayer."

[9] P. 24, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

Goal 3. Improve *Academic Achievement Equity*

Historically in Vermont, as in the rest of the country, children residing in wealthier communities tend to have higher academic achievement than those from poorer districts. Equity in academic achievement would assume that this relationship would be weakened, if not severed.

Though the *Brigham* decision concentrates primarily on the funding of education, the justices were ultimately concerned with the impact of financial resources on student academic achievement. They stated that *"while we recognize that equal dollar resources do not necessarily translate equally in effect, there is no reasonable doubt that substantial funding differences significantly affect opportunities to learn."*[10]

This focus on academic achievement is reflected in the first 15 pages of Act 60 that are devoted to "quality components," specific reform initiatives designed to bolster student achievement. Thus, it is an implicit goal of Act 60, that the funding aspects of the legislation will enable poorer districts to invest more in schools and that this will ultimately improve children's academic performance.

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[10]P. 9, Brigham v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

III. Results: 2001–2002 Update

For each of the three equity goals, *Student Resource Equity*, *Tax Burden Equity* and *Academic Achievement Equity*, we investigated the extent to which Act 60 has reduced prior inequities and the extent to which inequities still exist, using the latest available data.

Our research indicates that Act 60 has *improved* prior inequities in all three measures. Though differences still exist in student resources, the spending differences are no longer statistically significant. Inequity is also evident in academic achievement, though the results show promising trends that this is, similarly, diminishing.

The results of each analysis are discussed below. Operational definitions used for each indicator are included in Appendix B.

Goal 1: *Student Resource Equity*

Prior to Act 60, there was a statistically significant relationship between town property wealth and per pupil spending.[11] Wealthy towns spent substantially more on education than poorer towns. With the advent of Act 60, this relationship has been significantly altered.

In FY 98, property-rich towns spent over 37% more for education than the poorest towns. This differential translated into an average of $2,100 more per pupil for those in the wealthiest communities, compared to the amount expended in the poorest towns. In FY 2002, this spending gap was less than 13%, with the per-pupil disparity diminished to $900. Most of the gain in spending equity is the result of increased financial investment by the poorest towns. Wealthy communities continue to spend more on their schools, but the relationship is *no longer statistically significant*[12] and *the gap has been significantly reduced.*

Thus, the latest results indicate that Act 60 is making significant gains in reducing inequities of student resources. Though inequities still exist, steady progress is being made to provide equal educational opportunity to children residing in every Vermont town.

Spending disparities that still exist are direct outcomes of local budget decisions made within communities. They also may reflect lingering financial strain experienced within poorer towns. Total equity (or equalized spending) may never be achieved, nor is it required by the *Brigham* decision, which calls for "substantially" equal resources.[13] The Supreme Court justices acknowledged the importance of local control for Vermonters and provisions to maintain this were incorporated into Act 60.

The graphs on the following page present the results of this analysis.

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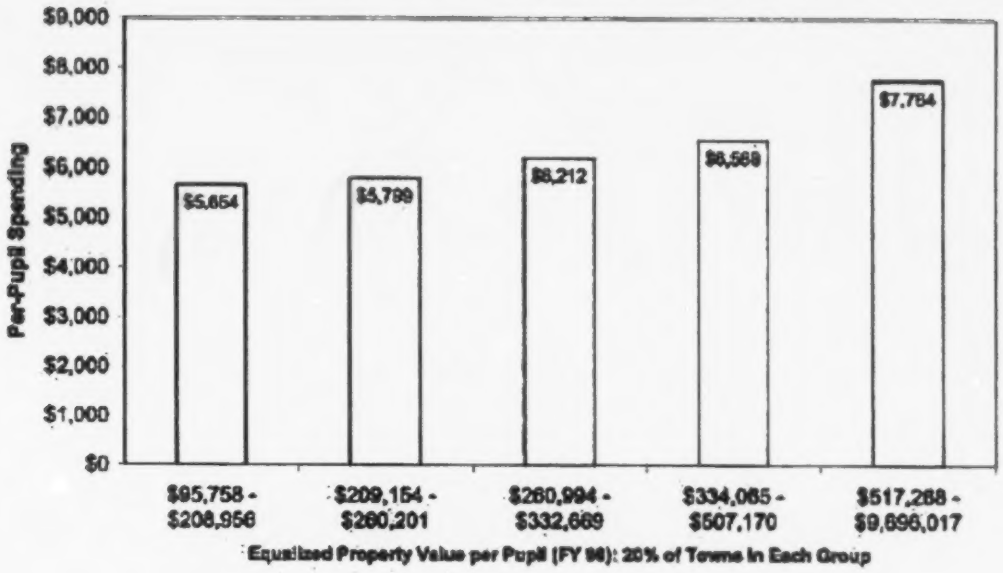
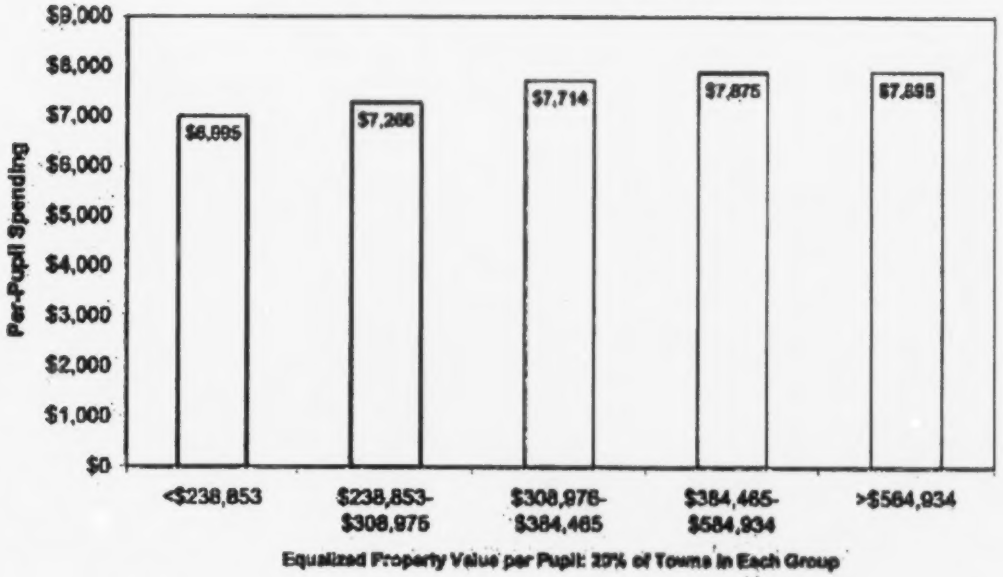
[11]For FY 98: Correlation coefficient = .581, $p < 0.000$, N=251.
[12]For FY 02: Correlation coefficient = .119, $p = .058$, N=254. NOT statistically significant.
[13]P. 23, *Brigham* v. State of Vermont, No. 96-502 (VT filed Feb. 5, 1997).

Property Wealth and Spending Per Pupil: FY 98



Property Wealth and Spending Per Pupil: FY 02



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Goal 2: *Tax Burden Equity*

Prior to Act 60, the burden of school taxes was negatively related to household income.[14] Households in the lowest income category paid the highest percentage of their income for school property taxes. Households in the highest income group paid the lowest percentage of their income to support schools. This negative correlation was statistically significant in FY 98.

The latest data indicate that there is now a *positive and statistically significant relationship*[15] between household income and percentage of income used to pay school property taxes. Thus, *before* Act 60 the tax burden to support local schools was heaviest on those least able to pay. It is now aligned with ability to pay.

In FY 98, prior to Act 60, households earning less than $25,000 paid more than three percent (3.3%) of their income for school taxes. Households in the highest income category spent the smallest percentage of their income (2.5%) to support local schools.

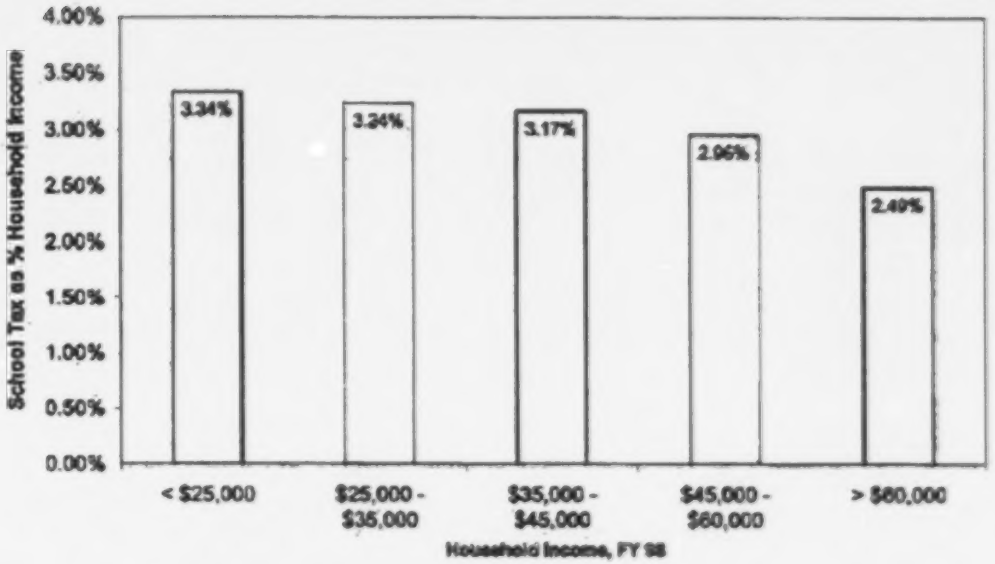
In FY 01, the poorest households paid less than two percent for school taxes (1.8%), while the wealthiest households paid 2.3%. Thus with Act 60, the tax burden to support education is more equitable and more related to household income levels.

It is important to note that the percentage of income paid as school property taxes dropped in all income categories, though the decrease is most dramatic for those earning the least.

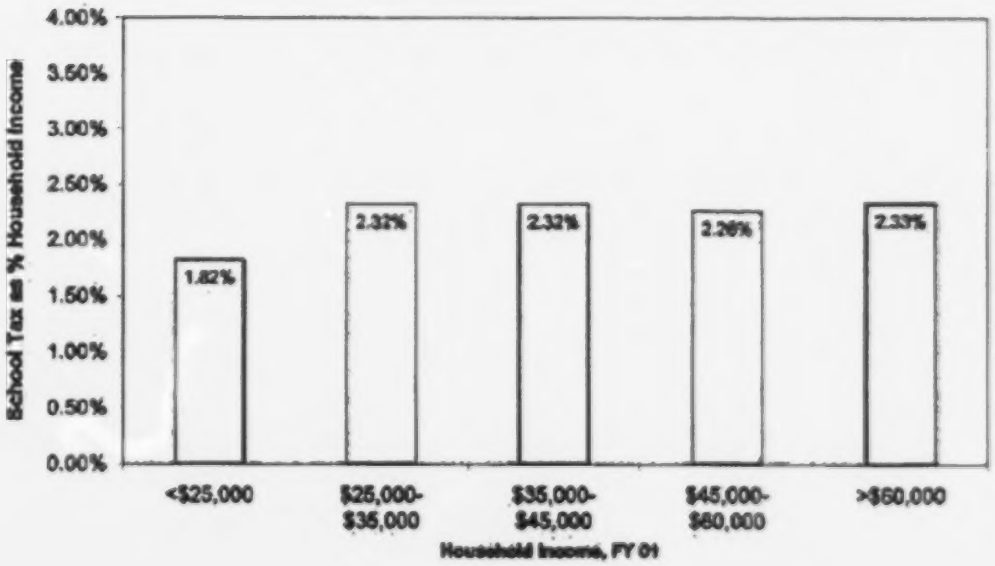
Thus our findings show that Act 60 has significantly improved tax burden equity for Vermont residents, as was intended by the legislation.

[14]For FY 98: Correlation coefficient = -.181, $p < 0.000$, N=129,600.
[15]For FY 01: Correlation coefficient = .223, $p < 0.000$, N=105,614.

School Property Tax (on homestead, after rebate) as Percent of Household Income: FY 98



School Property Tax (on homestead, after rebate) as Percent of Household Income: FY 01



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Goal 3: *Academic Achievement Equity*

The investigation of this goal involves two discrete analyses. The first looks at the extent to which academic achievement is related to town property wealth. The second analysis examines the relationship of student academic achievement to per-pupil spending.

Prior to Act 60, students living in wealthier towns performed better academically than students from poorer towns.[16] In addition, before Act 60, students living in towns that spent more for education performed better academically.[17] In FY 01, ***both of these relationships still exist and both are statistically significant.*** Thus both town wealth and the amount spent on education are strongly associated with student academic achievement.

The good news is that this achievement gap is diminishing on both measures. In FY 98, the percentage of students meeting or exceeding the standards (Grade 4, NSRE) was 19% higher for the wealthiest communities as compared to the poorest communities. In FY 01 this gap was reduced to 12%. Similarly, the achievement gap in FY 98 between the highest spending towns and the lowest spending towns was 15%. The latest data for FY 01 show this gap decreased to 9%.

Thus academic achievement inequities still exist. Children living in property-rich communities do better on these assessments. And, children living in towns that spend more on education do better. However, on both of these indicators, ***our analysis indicates a continued trend, since the passage of Act 60, toward shrinking this achievement gap.*** These results look especially promising since it continues the positive tendencies noted last year (see Appendix A for last year's results). National research indicates that the relationship between wealth and achievement is difficult to separate. However, Act 60 is clearly making a significant contribution to addressing this inequity for Vermont children.

This study also indicates that improvement in academic achievement is evident in *all* categories of town wealth and per-pupil spending. We see no evidence that improved achievement among children living in the poorest communities comes at the expense of academic improvement for those from the wealthier towns. The achievement gap has diminished, even as continuous improvement is noted across the board.

If Act 60 functions as intended, it will allow poorer communities to invest more in education. These results suggest that this investment will ultimately translate into improved academic success for children in those communities. This goal is a reflection of the primary equity objective of equal educational opportunity, where wealth no longer determines academic achievement.

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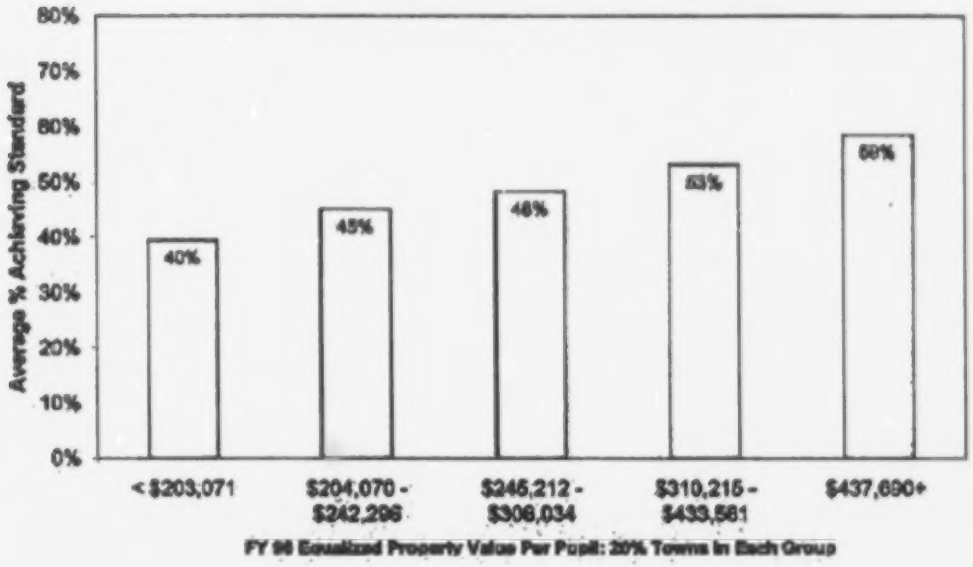
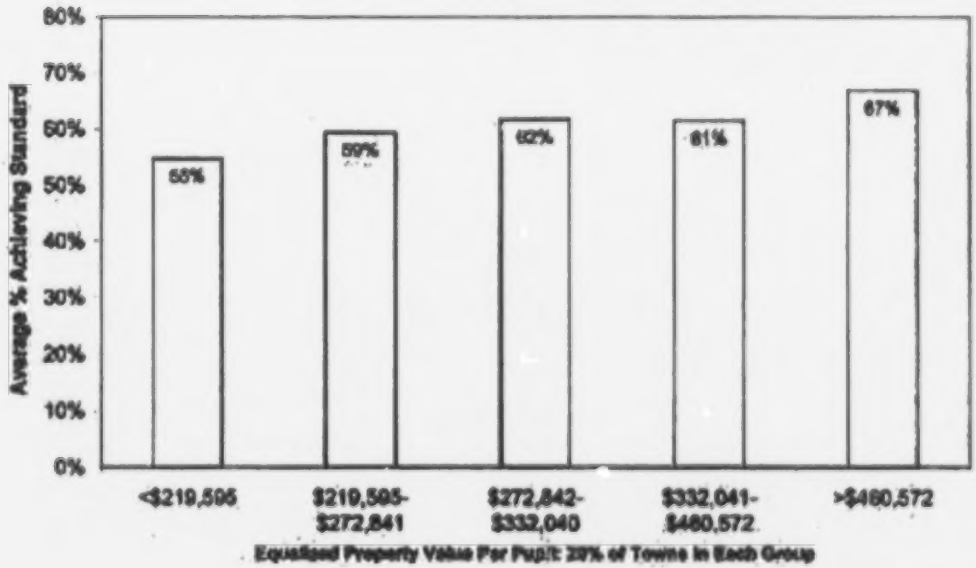
[16]For FY 98: Correlation coefficient = .274, $p < 0.000$, N=179.
For FY 01: Correlation coefficient = .230, $p < 0.002$, N=185.
[17]For FY 98: Correlation coefficient = .378, $p < 0.000$, N=179.
For FY 01: Correlation coefficient = .258, $p < 0.000$, N= 185.

Academic Achievement and Property Wealth, FY 98:
Average Percent Meeting or Exceeding the Standards on
Grade 4 New Standards Reference Exams



Academic Achievement and Property Wealth, FY 01:
Average Percent Meeting or Exceeding the Standards on
Grade 4 New Standards Reference Exams



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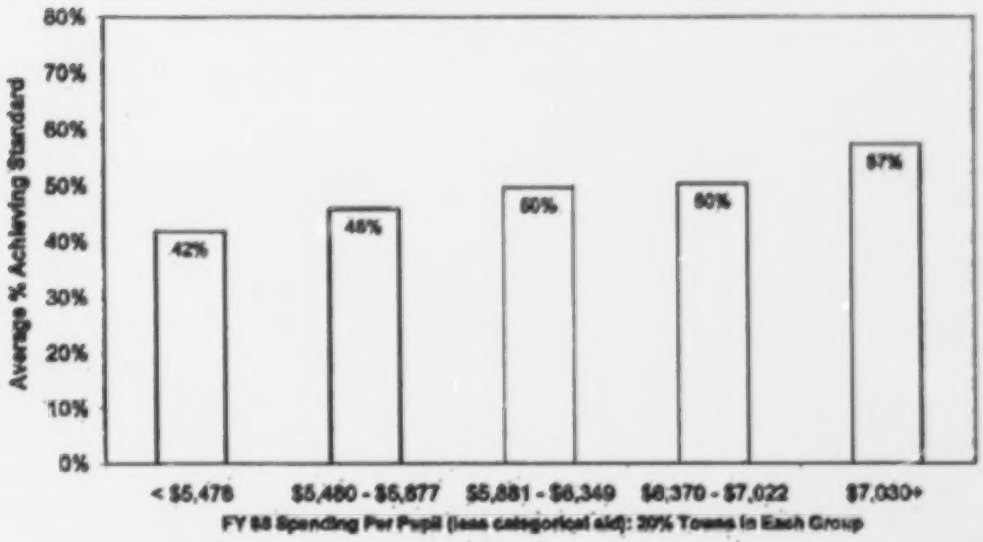
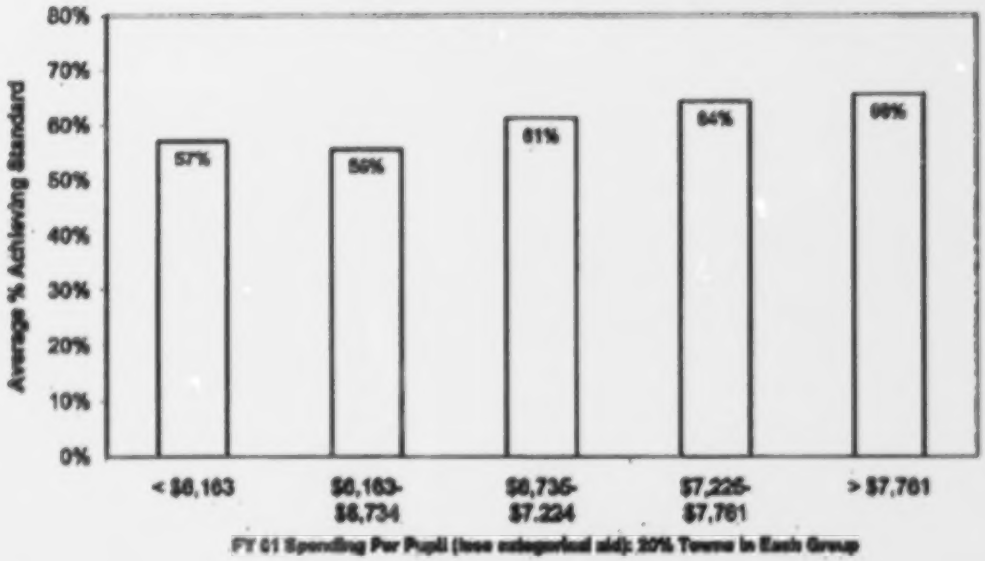
Academic Achievement and Spending, FY 98:
Average Percent Meeting or Exceeding the Standards on
Grade 4 New Standards Reference Exams



Academic Achievement and Spending, FY 01:
Average Percent Meeting or Exceeding the Standards on
Grade 4 New Standards Reference Exams



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IV. Conclusions

This analysis, using the latest available data for 2001–2002, reveals that Act 60 is continuing to make substantial and noteworthy improvements in providing equal educational opportunity for all Vermont students.

- ***Significant progress has been made in reducing the spending gap between wealthy and poor towns.***
- ***The tax burden for school taxes is far more equitable.***
- ***The achievement gap between children residing in wealthy towns and those in poorer towns has continued to decrease for the second consecutive year.***

These results suggest that:

1. ***Act 60 is fulfilling the mandates of the Supreme Court decision and the goals of the legislation.*** Notable progress is being made toward providing equal educational opportunities and reducing past educational inequities.

2. Act 60 has had the most dramatic impact on tax burden for households with low income. In spite of this, ***school property tax burdens on homesteads in all income categories have been reduced.***

3. Though the spending gap is shrinking, local communities still make independent and unique decisions about their schools and education expenditures. ***Local control has not been diminished with Act 60.***

4. ***In Vermont, these results imply that money matters.*** The amount spent on education is statistically related to academic achievement. As towns have increased their financial investment, student academic performance has improved. Academic achievement gains are most notable in poorer communities that formerly had difficulty affording more.

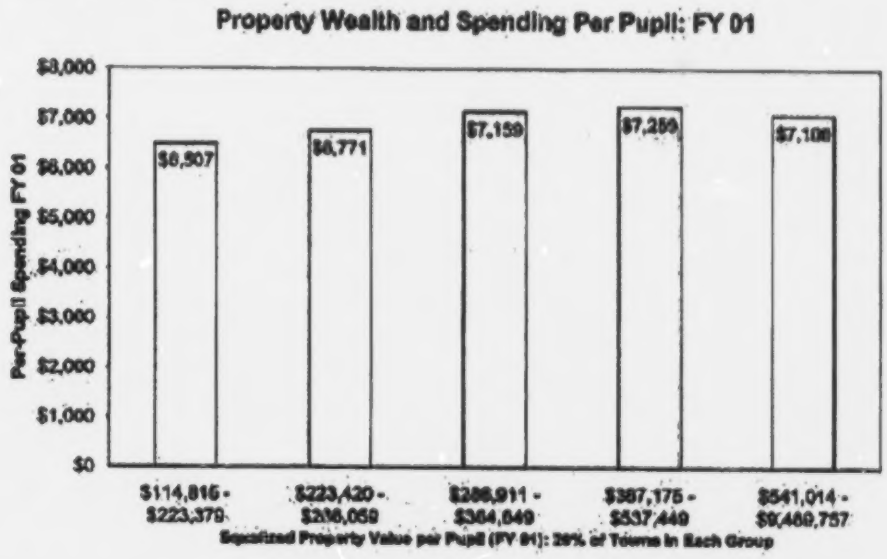
5. Achievement gains are noted for all Vermont students. Though students living in the poorest communities have made the most discernible improvement, those in wealthier towns have also improved. This suggests that the quality components of Act 60 are effective. It also indicates that academic achievement is not a zero-sum game. ***All kids can be winners.***

6. The outcomes of this study reinforce the results from last year's analysis. ***Equity gains noted last year continue, and in most cases are strengthened.*** This suggests that the financial and quality aspects of Act 60 can lead to further advances in improving equity.

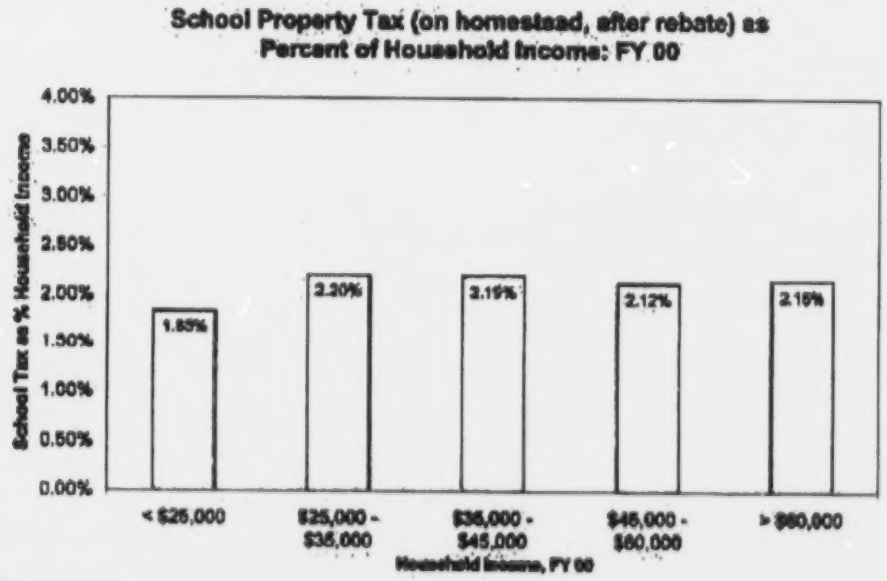
Given these positive findings, it seems wise to continue to financially and politically support the critical aspects of Act 60 that have been effective in improving equity. Though the tax impact for some Vermonters has been burdensome, the impact for students—*all* students—has been positive. The path to equal educational opportunity is rough and full of potholes and landmines. However, given the results of this analysis, we believe that Vermont is maintaining its bearing and pursuing the right direction in the way it funds its schools.

Appendix A
Results from Previous Year's Study

Goal 1: Student Resource Equity: FY 01[18]



Goal 2: Tax Burden Equity: FY 00



[18]This graph is slightly different than the one published in last year's report. At the time of publishing last year, the FY 01 equalized property wealth data were not available. This graph uses the appropriate data for FY 01.

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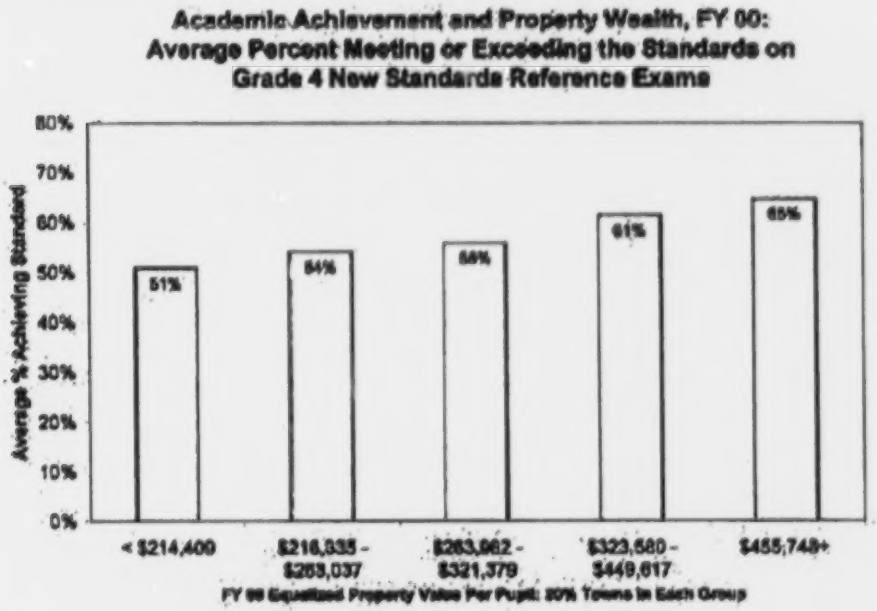
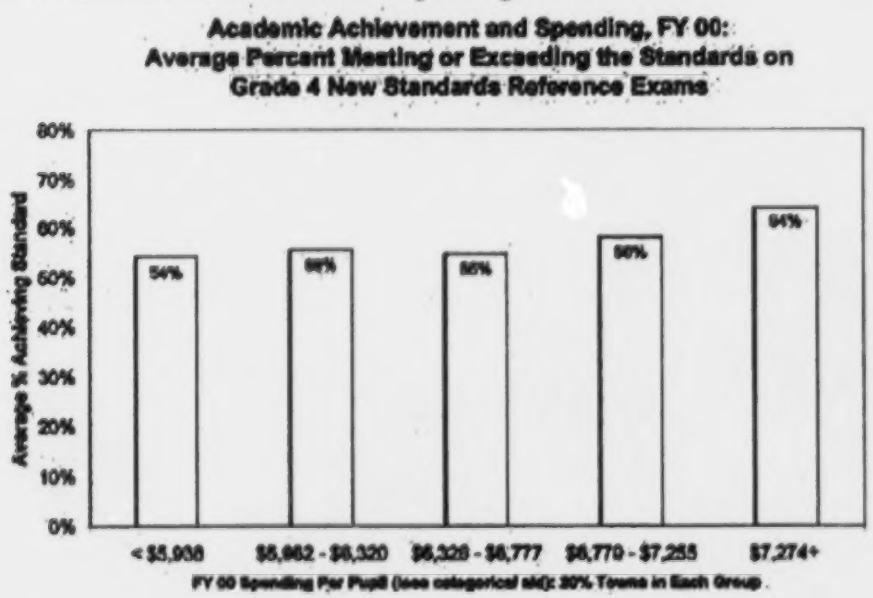
Goal 3: Academic Achievement and Property Wealth: FY 00



Goal 3: Academic Achievement and Spending: FY 00



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Appendix B
Operational Definitions of Variables Used in this Study

Property Wealth of Towns

Defined as the equalized property value of each town. This is the total appraised value of all properties in each town after being adjusted (equalized) for "fair market" value. This equalization adjustment is determined annually by the Property Valuation Division of the Tax Department. The property wealth value was divided by the equalized pupil count.

Equalized Pupil Count

Defined in Vermont statute 16 V.S.A. section 4001(3) and determined by the Department of Education. The actual number of students is adjusted to reflect grade level, poverty and number of students for whom English is not the primary language. It is calculated as the long-term weighted average daily membership (ADM), multiplied by the ratio of the statewide long-term ADM to the statewide long-term *weighted* ADM.

Spending Per Pupil

Defined here as the "local education spending" (LES) plus donations, as reported to the Department of Education. This measure is not perfect. First, there may be errors in the reporting of donations. Second, there was a change in the state aid for special education and transportation under Act 60. The measure chosen slightly *underestimates* the increase in total spending between the two years (FY 98 and FY 02) in towns that had a low foundation share under the old system (i.e., towns with high property-wealth per pupil). However, *within either year*, it is comparable between towns.

Local Education Spending (LES)

Defined in Vermont statute 16 V.S.A. section 4001 (6) as the amount of the school budget "which is paid for by the general state support grant and from local share property tax revenues. (It) does not include any portion of the school budget paid for by any other sources such as endowments, parental fund raising, federal funds, nongovernmental grants or other state funds such as special education funds under chapter 101" of Title 16.

School Property Tax:

Defined here as the *net* school property tax paid on the homestead *after* accounting for income sensitivity adjustments and rebates. The homestead is a year-round residence and up to two acres, as defined by Vermont statute 32 V.S.A. section 5401 (7). In FY 98, the net school property tax was the school tax rate as applied to the homestead value. For homeowners eligible for the rebate program, the savings have been subtracted from the calculations of their tax. In FY 01, the net school property tax includes adjustments from the income sensitivity, as well as the rebate program.

Household Income

Defined in Vermont statutes 32 V.S.A. section 6061. With some exceptions, this is basically the combined adjusted gross income (AGI) for all persons in a household.

For FY 98, the Tax Department had information on the property taxes paid by homesteads for all homeowners who filled in the appropriate boxes on their income tax return. This data was linked to the AGI of the filer and, if the household applied for the rebate program, the household income. When various options were being analyzed to respond to the *Brigham* decision, the Joint Fiscal Office estimated household income by using the actual household income if known (predominantly for lower income households) and regression equations to convert AGI to household income for the others. The Joint Fiscal Office analysis of the relationship between household income and school taxes in FY 98 is used in this report.

In FY 01, we used the actual household income figures as reported by those who filed for income sensitivity.

Data used within each year are consistent. There are some differences between FY 98 and FY 01. Some household incomes were estimated in FY 98. Also, FY 98 data includes more high-income filers, while FY 01 generally does not include households with income over $88,000. If more high-income filers were included in the FY 01 data set, we would expect to see the "school property tax as a percent of income" drop slightly in the highest income group.

Appendix C
Caveats When Analyzing Academic Achievement

This study defines academic achievement as the percent of students meeting or exceeding the standards on the New Standards Reference Exam (NSRE). The specific indicator used in the analysis was the average of the percentage of students meeting or exceeding the standards across seven subtests. Our analysis was limited to the fourth grade results.

There are several caveats to this analysis. The following is a brief discussion outlining potential limitations of the analysis.

First, we know that using an *average of percentages* is not the same as the absolute or scaled scores on assessment tests. Thus our definition of academic achievement uses a surrogate construct for actual academic achievement. We believe that though the indicator is in some ways crude, that it does provide a valid snapshot of students' performance. Also, the use of percentage of students meeting or exceeding the standards is a commonly used convention, both in Vermont and nationally for assessing academic achievement. We also realize that Vermont has been using the NSRE for only four years and that this is barely enough time to establish trends.

In addition, national assessment research suggests that up to 70% of the variance of test results in criteria-referenced exams may be due to "cohort effects." Particular groups of children may do very well one year. The next year, an entirely different set of children take the exam. Comparison from year to year therefore needs to be done very cautiously. In this study, though, we believed that probable cohort effects would be minimized by including the entire state in the population. Some cohorts in some schools most probably inflate the data, while other cohorts may deflate the data.

Another factor that may influence achievement results is the particular form of the NSRE taken. In 1998, students took Form C of the NSRE. Since then, Form D has been used.

Another caveat is not evident in this study, but may become important in future years. Educators have recognized a phenomenon known as an "implementation dip" when beginning a new system of assessment. Researchers have found that the results of the first few years of implementing a new assessment typically show significant improvement. These encouraging advances, however, are frequently followed by a "dip" in the gains. If this occurs with the NSRE in Vermont, then the improvement noted from 1998 to 2001 may not be sustained in the next few years. Educators predict that after several years the effects of the "implementation dip" will level off.

Lastly, student academic performance is the result of accumulated experience for each student. Students' test results in 4th grade do not merely reflect the learning experiences in 4th grade, but also include learning from preschool, kindergarten, 1st, 2nd and 3rd grades. Thus, improvement from the provision of additional resources or instructional strategy for one or two years may not show up in changes in assessment results, at least for a while.

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